REMARKS

The Office Action dated September 11, 2006 has been received and carefully noted. The above amendments to the claims and the following remarks, are submitted as a full and complete response thereto.

In accordance with the foregoing, claims 1 and 2 have been amended to improve clarity of the features recited therein and claims 3-4 have been added further defining the present application. Support for the amended claimed recitations may be found, at least, on page 10 of the Specification of the present application. No new matter is being presented, and approval and entry are respectfully requested. As will be discussed below, it is also requested that all of claims 1-4 be found allowable as reciting patentable subject matter.

Claims 1-4 stand rejected and pending and under consideration.

REJECTION UNDER 35 U.S.C. § 103:

On page 2 of the Office Action, claims 1 and 2 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Japan Publication No. 61-157741 to Okano ("Okano"), U.S. Patent No. 4,869,222 to Klassen ("Klassen") in view of Japan Publication No. 2001-234798 to Aono et al. ("Aono"). According to the Office Action, Okano and Klassen describes the recitations of the plurality of air intake passages and the throttle body. Aono describes modifying an airflow signal to determine airflow for

each engine cylinder and then determine a corresponding fuel injection amount. The rejection is traversed and reconsideration is requested.

Independent claim 1, upon which claim 3 is dependent, recites an air intake apparatus for an internal combustion engine, including a plurality of air intake passages provided at each cylinder of a multi-cylinder internal combustion engine, and a throttle body provided at each of the plurality of air intake passages. The air intake apparatus also includes an air flow rate sensor for measuring air volume being suctioned into a cylinder corresponding to the air intake passage provided on a part of the insides of the plurality of air intake passages and a control section provided to calculate air volume suctioned into each of cylinders other than the cylinder provided with the air flow rate sensor by multiplying air volume measured by the air flow rate sensor by predetermined coefficients.

Independent claim 2, upon which claim 4 is dependent, recites a control apparatus for an internal combustion engine, including a plurality of air intake passages provided at each cylinder of a multi-cylinder internal combustion engine, a throttle body provided at each of the plurality of air intake passages, and an air flow rate sensor being provided on a part of the insides of the plurality of air intake passages and measuring air volume being suctioned into a cylinder corresponding to the air intake passage. The control apparatus also includes a control section for calculating air volume suctioned into each of cylinders other than the cylinder provided with the air flow rate sensor by multiplying air volume measured by the air flow rate sensor by predetermined coefficients, calculating the fuel

injection quantity into each cylinder, and outputting a signal to a fuel injector of the internal combustion engine.

As will be discussed below, Okano, Klassen, and Aono fail to disclose or suggest the elements of any of the presently pending claims.

Okano generally describes an internal combustion engine having a throttle valve in every intake pipe in each cylinder and providing an intake pipe pressure detecting means detecting a pressure in the intake pipe synchronously. See Abstract. Klassen, in turn, describes an internal combustion engine 12 and an airflow meter 36 including an airflow sensor 38 to generate an airflow signal (MAF) proportional to the mass airflow inducted through an air intake 16. See column 3, lines 38-50.

In addition, Aono describes an air-fuel ratio control device of an internal combustion engine controlling air-fuel ratio by measuring density of gas in a manifold, measuring quantity of air passing through a throttle, measuring an angle of a crank of the internal combustion engine, discriminating a cylinder in an air intake stroke in accordance with a crank angle, computing an air quantity flowing into the cylinder in accordance with the air intake efficiency and the above sensor data, and calculating fuel injection quantity to the cylinder in accordance with the air quantity.

Applicant respectfully asserts that Okano, Klassen, and Aono, individually or combined, do not teach or suggest that the air volume suction may be calculated for those cylinders not including the air flow rate sensor. Although Okano, Klassen, and Aono appear to calculate airflow, such calculation is performed in a cylinder provided with the

airflow sensor, which is contrary to the recitations of independent claims 1 and 2. Neither reference shows that in an air intake apparatus including a plurality of air intake passages, air volume suctioned into each of cylinders, other than the cylinder provided with the air flow rate sensor may be calculated by multiplying air volume measured by the air flow rate sensor by predetermined coefficients.

The intake pipe pressure detecting means of Okano, the internal combustion engine 12 and the airflow meter 36 of Klassen, and the air-fuel ratio control device of Aono fail to teach or suggest, at least, "a control section provided to calculate air volume suctioned into each of cylinders other than the cylinder provided with the air flow rate sensor by multiplying air volume measured by the air flow rate sensor by predetermined coefficients," as recited in independent claim 1, and, at least, "a control section for calculating air volume suctioned into each of cylinders other than the cylinder provided with the air flow rate sensor by multiplying air volume measured by the air flow rate sensor by predetermined coefficients, calculating the fuel injection quantity into each cylinder, and outputting a signal to a fuel injector of the internal combustion engine," as recited in independent claim 2.

Accordingly, in view of the foregoing, it is respectfully requested that independent claims 1 and 2 and related dependent claims 3 and 4, respectively, be allowed.

CONCLUSION:

In view of the above, Applicant respectfully submits that the claimed invention recites subject matter which is neither disclosed nor suggested in the cited prior art. Applicant further submits that the subject matter is more than sufficient to render the claimed invention unobvious to a person of skill in the art. Applicant therefore respectfully requests that each of claims 1-4 be found allowable and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicant respectfully petitions for an appropriate extension of time.

Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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